

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
**WO 2004/045463 A3**

(51) International Patent Classification<sup>7</sup>: **A61F 2/06**, 2/24

Mountain View, CA 94040 (US). **COX, Daniel, L.**; 191 Washington Avenue, Palo Alto, CA 94301 (US).

(21) International Application Number:

PCT/US2003/036633

(74) Agents: **SCHELLER, James, C., Jr.** et al.; Blakely, Sokoloff, Taylor & Zafman LLP, 12400 Wilshire Boulevard, 7th Floor, Los Angeles, CA 90025 (US).

(22) International Filing Date:  
13 November 2003 (13.11.2003)

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW.

(25) Filing Language: English

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(26) Publication Language: English

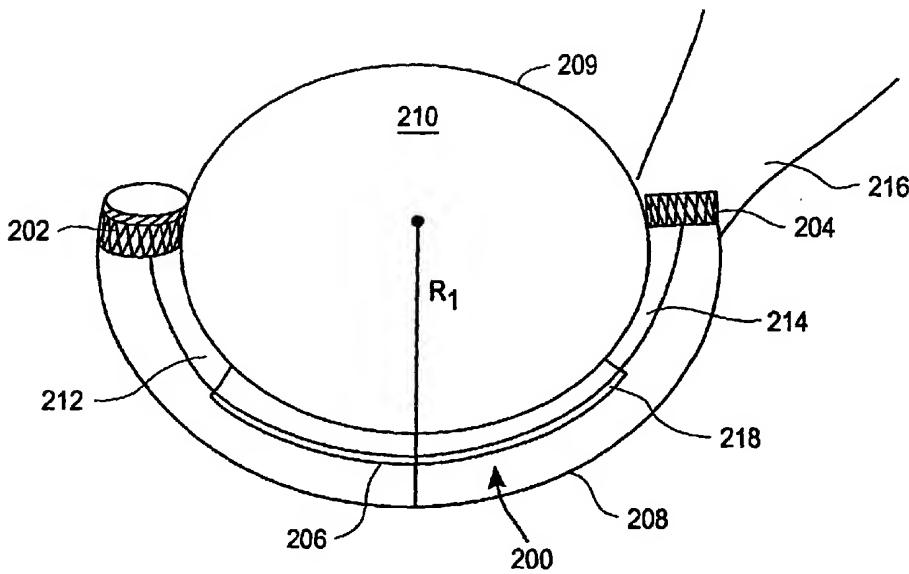
(30) Priority Data:  
10/295,714 15 November 2002 (15.11.2002) US

[Continued on next page]

(71) Applicant: **ADVANCED CARDIOVASCULAR SYSTEMS, INC.** [US/US]; 3200 Lakeside Drive, Santa Clara, CA 95054 (US).

(72) Inventors: **WEBLER, William, E.**; 1725 Dashero Place, Escondido, CA 92029 (US). **HYDE, Gregory, Mathew**; 1449 Laurel Street, Menlo Park, CA 94025 (US). **FEEZOR, Christopher**; 575 S. Rengstorff Avenue, #41,

(54) Title: APPARATUSES AND METHODS FOR HART VALVE REPAIR



**WO 2004/045463 A3**

(57) Abstract: A medical device for treating a defective heart valve. The medical device comprises a distal anchoring member for disposing in a blood vessel. A proximal anchoring member for disposing in or at an entrance of the blood vessel. A telescoping assembly coupling at a first end to the distal anchoring member and at a second end to the proximal anchoring member. The telescoping assembly is deployable into the blood vessel. The telescoping assembly reduces a distance between the distal anchoring member and the proximal anchoring member, wherein the telescoping assembly comprises of at least two members capable of sliding into each other giving the telescoping assembly adjustable lengths.

**Published:**

- *with international search report*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

21 October 2004

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 03/36633

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 A61F2/06 A61F2/24

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 A61F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 325 823 B1 (HORZEWSKI MICHAEL J ET AL) 4 December 2001 (2001-12-04)  column 3, line 12 – column 4, line 67; figure 3B	1,6-8, 10,22, 27,42,80
Y	-----	11-21, 23-26, 28,30-40
Y	WO 02/062270 A (SOLEM JAN OTTO ;KIMBLAD PER OLA (SE)) 15 August 2002 (2002-08-15)  page 9, line 8 – page 13, line 14 ----- -/-	11-21, 23-26, 28,30-40

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

° Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

28 April 2004

Date of mailing of the international search report

09.08.2004

Name and mailing address of the ISA  
European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Daintith, N

## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/US 03/36633

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6 419 696 B1 (SPENCE PAUL A ET AL) 16 July 2002 (2002-07-16)  column 6, line 14 – line 27 column 7, line 9 – column 9, line 33; figures 5A,B -----	11-21, 23-26, 28,30-40
A	WO 02/39925 A (PENN IAN M ;RICCI DONALD R (CA); EVYSIO MEDICAL DEVICES ULC (CA);) 23 May 2002 (2002-05-23) abstract -----	1,6-40, 42,80

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/US 03/36633

### Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.: 54–58, 77–79, 81, 82  
because they relate to subject matter not required to be searched by this Authority, namely:  
**Rule 39.1(iv) PCT – Method for treatment of the human or animal body by surgery**
  
2.  Claims Nos.: 2–5  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:  
**see FURTHER INFORMATION sheet PCT/ISA/210**
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

**see additional sheet**

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
**clms: 1, 6–40, 42,80**

#### Remark on Protest

- The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Claims Nos.: 54-58,77-79,81,82

Rule 39.1(iv) PCT - Method for treatment of the human or animal body by surgery

-----  
Continuation of Box I.2

Claims Nos.: 2-5

Present claims 2 to 5 relate to the position of placement of the medical device in the human body and do not comprise any technical features of a medical device. For this reason, these claims lack clarity within the meaning of Article 6 PCT. This lack of clarity in the present case is such as to render a meaningful search over the scopeof claims 2 to 5 impossible.

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

**INTERNATIONAL SEARCH REPORT**

International Application No

PCT/US 03/36633

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 6325823	B1	04-12-2001	AU EP WO	1238701 A 1229861 A1 0132103 A1		14-05-2001 14-08-2002 10-05-2001
WO 02062270	A	15-08-2002	US BR CA WO EP US US US	2001018611 A1 0116872 A 2434412 A1 02062270 A1 1370200 A1 2003069636 A1 2004039443 A1 2004102840 A1		30-08-2001 10-02-2004 15-08-2002 15-08-2002 17-12-2003 10-04-2003 26-02-2004 27-05-2004
US 6419696	B1	16-07-2002	AU CA CN EP JP WO US	6522501 A 2414022 A1 1440261 T 1296618 A1 2004502494 T 0203892 A1 2002173841 A1		21-01-2002 17-01-2002 03-09-2003 02-04-2003 29-01-2004 17-01-2002 21-11-2002
WO 0239925	A	23-05-2002	AU WO CA EP JP US	1489002 A 0239925 A2 2428836 A1 1337200 A2 2004512921 T 2004098091 A1		27-05-2002 23-05-2002 23-05-2002 27-08-2003 30-04-2004 20-05-2004